

ABSTRACT

A method for designing a base includes (1) selecting a location of a first center of expansion of a child part (CE_{child}) relative to a parent part; (2) determining a location of a second center of expansion of a bond joint (CE_{bond}) bonding the child part to the base; and (3) determining a location of a third center of expansion of the base (CE_{base}) on a centerline, which is defined by the CE_{child} and the CE_{bond} , so the CE_{child} does not substantially move relative to the parent part under a temperature change. To determine the location of the CE_{base} , the method further includes (a) determining a length change to the child part from the CE_{bond} to the CE_{child} under the temperature change; (b) determining a length of the base that produces the same length change under the temperature change; and (c) locating the CE_{base} at the length away from the CE_{bond} .